COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF TRANSPORTATION
OFFICE OF TRANSPORTATION PLANNING

Request for Response

Green Line Extension - Conceptual Engineering &
Draft Environmental Impact Report

RFR No. EOT_Green Line DEIR

Procurement Schedule:
RFR Release Date: March 30, 2007
Submission of Written Questions: April 27, 2007
Pre-Proposal Meeting: May 8, 2007
Submission of Responses Deadline Date: May 25, 2007

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I. REQUIRED SPECIFICATIONS

The terms of *801 CMR 21.00: Procurement of Commodities and Services* (and *808 CMR 1.00: Compliance, Reporting and Auditing for Human and Social Services*, if applicable) are incorporated by reference into this RFR. Words used in this RFR shall have the meanings defined in 801 CMR 21.00 (and 808 CMR 1.00, if applicable). Additional definitions may also be identified in this RFR. Unless otherwise specified in this RFR, all communications, responses, and documentation must be in English, all measurements must be provided in feet, inches, and pounds and all cost proposals or figures in U.S. currency. All responses must be submitted in accordance with the specific terms of this RFR. If a bidder fails to meet any material terms, conditions, requirements, or procedures, its proposal may, at the determination of EOT/MassHighway, be deemed unresponsive and disqualified.

Affirmative Market Program (AMP): Massachusetts Executive Order 390 established a policy to promote the award of state contracts in a manner that develops and strengthens Minority and Women Business Enterprises (M/WBEs) that resulted in the Affirmative Market Program in Public Contracting. M/WBEs are strongly encouraged to submit responses to this RFR, either as prime vendors, joint venture partners or other type of business partnerships. All bidders must follow the requirements set forth in the AMP section of the RFR, which will detail the specific requirements relating to the prime vendor's inclusion of M/WBEs. Bidders are required to develop creative initiatives to help foster new business relationships with M/WBEs within the primary industries affected by this RFR. In order to satisfy the compliance of this section and encourage bidder's participation of AMP objectives, the Affirmative Market Program (AMP) Plan for large procurements greater than $50,000 will be evaluated at 10% or more of the total evaluation. Once an AMP Plan is submitted, negotiated and approved, the agency will then monitor the contractor's performance, and use actual expenditures with SOMWBA certified contractors to fulfill their own AMP expenditure benchmarks. M/WBE participation must be incorporated into and monitored for all types of procurements regardless of size, however, submission of an AMP Plan is mandated only for large procurements over $50,000.

This RFR will contain some or all of the following components as part of the Affirmative Market Program Plan submitted by bidders:

- Sub-contracting with certified M/WBE firms as defined within the scope of the RFR.
- Growth and Development activities to increase M/WBE capacity.
- Ancillary use of certified M/WBE firms.
- Past Performance or information of past expenditures with certified M/WBEs.
- Additional incentives for bidders to commit to at least one certified MBE and WBE in the submission of AMP plans.

A Minority Business Enterprise (MBE), Woman Business Enterprise (WBE), M/Non-Profit, or W/Non-Profit, is defined as such by the State Office of Minority and Women Business Assistance (SOMWBA). All certified businesses that are included in the bidder's AMP proposal are required to submit an up to date copy of their

SOMWBA certification letter. The purpose for this certification is to participate in the Commonwealth's Affirmative Market Program for public contracting. Minority- and Women-Owned firms that are not currently certified but would like to be considered as an M/WBE for the purpose of this RFR should submit their application at least two weeks prior to the RFR closing date and submit proof of documentation of application for consideration with their bid proposal. For further information on SOMWBA certification, contact their office at 1-617-973-8692 or via the Internet at mass.gov/somwba.

Affirmative Market Program Subcontracting Policies: Prior approval of the agency is required for any subcontracted service of the contract. Agencies may define required deliverables including, but not limited to, documentation necessary to verify subcontractor commitments and expenditures with Minority- or Women-Owned Business Enterprises (M/WBEs) for the purpose of monitoring and enforcing compliance of subcontracting commitments made in a bidder's Affirmative Market Program (AMP) Plan. Contractors are responsible for the satisfactory performance and adequate oversight of its subcontractors.

Best Value Selection and Negotiation: The Procurement Management Team (PMT) may select the response(s) which demonstrates the best value overall, including proposed alternatives that will achieve the procurement goals of the department. The PMT and a selected bidder, or a contractor, may negotiate a change in any element of contract performance or cost identified in the original RFR or the selected bidder's or contractor's response which results in lower costs or a more cost effective or better value than was presented in the selected bidder's or contractor's original response.

Bidder Communication: Bidders are prohibited from communicating directly with any employee of the Executive Office of Transportation or the Executive Office of Environmental Affairs about this RFR except as specified in this RFR, and no other individual Commonwealth employee or representative is authorized to provide any information or respond to any question or inquiry concerning this RFR. Bidders may contact the contact person for this RFR (see page 13) with questions or in the event this RFR is incomplete or the bidder is having trouble obtaining any required attachments electronically through Comm-PASS.

Comm-PASS: If this RFR has been distributed electronically using the Comm-PASS system, RFR attachments that are referenced are incorporated by reference into the RFR and are available as separate files within the Forms tab and Specifications tab of the Comm-PASS Solicitation record. OSD Forms are also available at www.mass.gov/osd under the Related Links section. While Comm-PASS offers optional, value-added, automated Comm-PASS Subscription Service on an annual-fee basis, all bidders are solely responsible for obtaining and completing the required attachments that are identified in this RFR and for checking Comm-PASS for any addenda or modifications that are subsequently made to this RFR or attachments. The Commonwealth and its subdivisions accept no liability for and will provide no accommodation to bidders who fail to check for amended RFRs/Requests for Quotes (RFQs) or any other procurement opportunities and subsequently submit inadequate or incorrect responses. Bidders are advised to check the Last Changed Date field on the Summary page or the Amendment History within the Other

Information tab of RFRs for which they intend to submit a response in order to ensure that they have the most recent RFR files. Bidders may not alter (manually or electronically) the RFR language or any RFR component files. Modifications to the body of the RFR, specifications, terms and conditions, or which change the intent of this RFR are prohibited and may disqualify a response.

Comm-PASS Subscription Service The Comm-PASS Subscription Service is sponsored by the Operational Services Division. This service offers a prospective bidder a secure, web-based desktop that contains tools to track and manage postings including solicitation announcements, Request for Responses (RFRs), and Contracts that match the subscriber-designated set of categories and sub-categories on the Commonwealth's Procurement Access and Solicitation System (Comm-PASS).

Comm-PASS Basic Service will provide a subscriber with:

- Secure web-based desktop within Enhanced Comm-PASS for document management.
- A customizable profile reflecting the bidder's product/service areas of interest.
- Refined commodity and service categories and sub-categories.
- Full-cycle, automated email alert whenever a solicitation of interest is posted or updated.
- Access to Online Bidder Forums to allow for virtual attendance and participation.
- Tools to submit bids electronically to an encrypted lock-box.

Every public purchasing entity within the borders of Massachusetts may post their solicitations on Comm-PASS at no charge. Comm-PASS has the potential to become the sole site for reviewing and responding electronically to public solicitations in Massachusetts. Fees for the Comm-PASS Subscription Service are based on costs to operate, maintain and develop the Comm-PASS system.

Contract Expansion: If additional funds become available during the contract duration period, the department reserves the right to increase the maximum obligation to some or all contracts executed as a result of this RFR or to execute contracts with contractors not funded in the initial selection process, subject to available funding, satisfactory contract performance and service or commodity need.

Costs: Costs which are not specifically identified in the bidder's response, and accepted by EOT/MassHighway as part of a contract, will not be compensated under any contract awarded pursuant to this RFR. The Commonwealth will not be responsible for any costs or expenses incurred by bidders responding to this RFR.

Electronic Communication/Update of Bidder's/Contractor's Contact Information: It is the responsibility of the prospective bidder and awarded contractor to keep current the email address of the bidder's contact person and prospective contract

manager, if awarded a contract, and to monitor that email inbox for communications from the PMT, including requests for clarification. The PMT and the Commonwealth assume no responsibility if a prospective bidder's/awarded contractor's designated email address is not current, or if technical problems, including those with the prospective bidder's/awarded contractor's computer, network or internet service provider (ISP) cause email communications sent to/from the prospective bidder/awarded contractor and the PMT to be lost or rejected by any means including email or spam filtering.

Electronic Funds Transfer (EFT): All bidders responding to this RFR must agree to participate in the Commonwealth Electronic Funds Transfer (EFT) program for receiving payments, unless the bidder can provide compelling proof that it would be unduly burdensome. EFT is a benefit to both contractors and the Commonwealth because it ensures fast, safe and reliable payment directly to contractors and saves both parties the cost of processing checks. Contractors are able to track and verify payments made electronically through the Comptroller's Vendor Web system. A link to the EFT application can be found on the OSD Forms page (www.mass.gov/osd). Additional information about EFT is available on the VendorWeb site (www.mass.gov/osc). Click on MASSfinance.

Successful bidders, upon notification of contract award, will be required to enroll in EFT as a contract requirement by completing and submitting the *Authorization for Electronic Funds Payment Form* to this department for review, approval and forwarding to the Office of the Comptroller. If the bidder is already enrolled in the program, it may so indicate in its response. Because the *Authorization for Electronic Funds Payment Form* contains banking information, this form, and all information contained on this form, shall not be considered a public record and shall not be subject to public disclosure through a public records request.

The requirement to use EFT may be waived by the PMT on a case-by-case basis if participation in the program would be unduly burdensome on the bidder. If a bidder is claiming that this requirement is a hardship or unduly burdensome, the specific reason must be documented in its response. The PMT will consider such requests on a case-by-case basis and communicate the findings with the bidder.

Environmental Response Submission Compliance: In an effort to promote greater use of recycled and environmentally preferable products and minimize waste, all responses submitted should comply with the following guidelines:

- All copies should be printed double sided.
- All submittals and copies should be printed on recycled paper with a minimum post-consumer content of 30% or on tree-free paper (i.e. paper made from raw materials other than trees, such as kenaf). To document the use of such paper, a photocopy of the ream cover/wrapper should be included with the response.
- Unless absolutely necessary, all responses and copies should minimize or eliminate use of non-recyclable or non re-usable materials such as plastic report covers, plastic dividers, vinyl sleeves and GBC binding. Three ringed binders, glued materials, paper clips and staples are acceptable.

- Bidders should submit materials in a format which allows for easy removal and recycling of paper materials.
- Bidders are encouraged to use other products which contain recycled content in their response documents. Such products may include, but are not limited to, folders, binders, paper clips, diskettes,
- envelopes, boxes, etc. Where appropriate, bidders should note which products in their responses are made with recycled materials.
- Unnecessary samples, attachments or documents not specifically asked for should not be submitted.

Minimum Bid Duration: Pursuant to MGL c. 106, Section 2-205, bidders responses/bids made in response to this RFR must remain in effect for 90 days from the date of bid submission.

Northern Ireland Notice and Certification: All bidders must complete the Northern Ireland Notice and Certification form to satisfy M.G.L. c.7 section 22C, which states that no state agency may procure commodities or services from any bidder employing ten (10) or more employees in an office or other facility located in Northern Ireland unless the bidder certifies through the notice and certification form that if it employs ten or more employees in Northern Ireland, a) the bidder does not discriminate in employment, compensation or the terms, conditions and privileges of employment on account of religious or political belief, b) the bidder promotes religious tolerance within the workplace and the eradication of any manifestations of religious and other illegal discrimination and, c) the bidder is not engaged in the manufacture, distribution or sale of firearms, munitions, including rubber or plastic bullets, tear gas, armored vehicles or military aircraft for use or deployment in any activity in Northern Ireland.

Public Records: All responses and information submitted in response to this RFR are subject to the Massachusetts Public Records Law, M.G.L., c. 66, s. 10, and to c. 4, s. 7, ss. 26. Any statements in submitted responses that are inconsistent with these statutes shall be disregarded.

Reasonable Accommodation: Bidders with disabilities that seek reasonable accommodation, which may include the receipt of RFR information in an alternative format, must communicate such requests in writing to the contact person. Requests for accommodation will be addressed on a case-by-case basis. A bidder requesting accommodation may be required to confirm his or her request in writing to the contact person. The request must state that it is based on a disability and specifically identify the accommodation desired. Although entities of the Commonwealth will make all reasonable efforts to accommodate the requests of bidders with disabilities, they reserve the right to reject unreasonable requests.

Restriction on the Use of the Commonwealth Seal: Bidders and contractors are not allowed to display the Commonwealth of Massachusetts Seal in their bid package or subsequent marketing materials if they are awarded a contract because use of the coat of arms and the Great Seal of the Commonwealth for advertising or commercial purposes is prohibited by law.

Estimated Provisions: The Commonwealth makes no guarantee that any commodities or services will be purchased from any contract resulting from this RFR. Any estimates or past procurement volumes referenced in this RFR are included only for the convenience of bidders, and are not to be relied upon as any indication of future purchase levels. In the event that no more than one proposal is received and deemed eligible, EOT/MassHighway may award the contract to the sole respondent but is not obligated to do so. EOT/MassHighway reserves the right to reissue this RFR if no successful contracts arise from this issuance.

Alternatives: A response which fails to meet any material term or condition of the RFR, including the submission of required attachments, may lose points or be deemed unresponsive and disqualified. Unless otherwise specified, bidders may submit responses proposing alternatives which provide equivalent, better or more cost effective performance than achievable under the stated RFR specifications. These alternatives may include related commodities or services that may be available to enhance performance during the period of the contract. The response should describe how any alternative achieves substantially equivalent or better performance to that of the RFR specifications.

The department will determine if a proposed alternative method of performance achieves substantially equivalent or better performance. The goal of is to provide the best value of commodities and services to achieve the procurement goals of EOT/MassHighway. Bidders that propose discounts, uncharged commodities and services or other benefits in addition to the RFR specifications may receive at the discretion of EOT/MassHighway a preference or additional points under this RFR as specified.

Contractors may also propose alternatives for equivalent, better or more cost effective performance than specified under the contractor's original response to enable the department to take advantage of enhanced technologies, commodities or services which become available during the term of the contract.

Brand Name or Equal. Unless otherwise specified in this RFR, any reference to a particular trademark, trade name, patent, design, type, specification, producer or supplier is not intended to restrict this RFR to any manufacturer or proprietor or to constitute an endorsement of any commodity or service, and EOT/MassHighway may consider clearly identified offers of substantially equivalent commodities and services submitted in response to such reference.

Use of a Procurement by a Single or Multiple Departments: Single Department Procurement/Multiple Department User Contracts [Comm-PASS - Open for Use Under Separate Contract Execution]. Departments reserve the right to include an option for other departments to purchase services or commodities under the same terms of the contract. Should departments exercise this option, bidders will be required to specify their ability to extend services to other departments and the rates to be used. Other departments may execute separate contracts with awarded bidders.

II. SCOPE OF SERVICES

Project Overview
This scope of services includes project management, public participation, data collection, conceptual engineering, preliminary capital and operating cost estimates, alternatives analysis, and preparing a Draft Environmental Impact Report (DEIR) for the Green Line Extension Project. It is expected that the DEIR will provide a reasonably complete and stand-alone description and analysis of the project, project alternatives, proposed action and environmental impacts, and will adequately address mitigation, such that the DEIR may be reviewed as, and be deemed adequate by MEPA as, a Final EIR for the project. The selected consultant(s) shall be precluded from consideration for future engineering and design work that results from this contract when these services are solicited in the future by either the Executive Office of Transportation or the MBTA.

Possible Use of Federal Funds
To maintain financial flexibility and preserve all options for the implementation of the project, the EOT/MassHighway is considering the possibility of pursuing the use of federal transportation funding for the Green Line Extension. Should this option become a reality, the EOT/MassHighway could require the consultant selected through this procurement process to prepare necessary submittal materials for the Federal Transit Administration New Starts program, as well as all materials associated with an Environmental Impact Statement. Prospective consultants are encouraged to consider this possibility in assembling their proposals for this procurement.

The following summarizes the services for each of the tasks:

TASK 1: PROJECT MANAGEMENT

Objectives:

- To monitor, organize, and control manpower assignments, work effort, submission of deliverables, schedules, and costs associated with the team's effort on this project.
- To maintain continual control of the progress of work and to ensure that all elements are being coordinated among all interested parties in accordance with direction from the Executive Office of Transportation, Office of Transportation Planning (EOT Planning).
- To ensure that the project is developed in a manner that is consistent with EOT Planning and the Consultant's quality standards.

Work Elements:

1.1 Project Procedures Manual
Prepare a project procedures manual that defines project goals, assigns project responsibilities, provides project contacts, details the scope of services, and defines the project schedule.

1.2 Kick-Off Meeting
Prepare for and conduct a project kick-off meeting between the Consultant and EOT Planning and follow up with detailed minutes.

1.3 Coordination Meetings

Prepare for and conduct weekly project coordination meetings with EOT Planning and other agencies. Develop agenda and detailed minutes for each meeting.

1.4 Issues/Action Logs

Develop and maintain an issues/action item list for tracking key elements of the project.

1.5 Progress Reports

Develop a monthly progress report to accompany the invoice.

1.6 Invoices

Prepare a monthly invoice to EOT Planning.

1.7 Quality Assurance/ Quality Control

The Consultant will designate a QA/QC team to review the design components and contract packages during the 10% design. The Team will meet for 2 days and comments will be documented to ensure that changes will be incorporated into the next design submission. All changes will be documented for contract auditing.

Task Deliverables:

- Project Procedures Manual
- Meeting notices, agenda, materials, and minutes
- Issues/Action Item List with monthly updates
- Monthly progress reports
- Project invoices
- Quality Control plans for review by contract auditor
- Memorandum identifying quality control changes for contract auditor

TASK 2: PUBLIC OUTREACH

Objectives:

- To create a participatory and advisory public process.
- To generate input from affected local citizens, regional and corridor-wide governmental bodies and interested groups.
- To coordinate the project with other ongoing projects, studies, and planning efforts.

Work Elements:

2.1 Project Advisory Working Group

Working with EOT Planning, the Consultant will propose a list of members for a Project Advisory Working Group that will reflect community interests in the corridor. The membership should include officials from Medford, Somerville and Cambridge; transportation interests and organizations; riders and planners; representatives of the disability and environmental justice communities; and other interested parties.

The Project Advisory Working Group will meet at startup, and about every 6 weeks afterward, or in advance of project milestones. The Consultant will develop a semi-annual newsletter and will also conduct a series of public meetings.

The Project Advisory Working Group will appoint a number of sub-groups, as needed, to address specific issues, topics, or sub-areas. The number of sub-groups will be determined by the Project Advisory Working Group and the number and schedule of meetings will be as needed.

The Consultant will assist EOT Planning with the Project Advisory Working Group including: staffing, record keeping, developing a mailing database; strategic planning; meeting arrangements; project fact sheets; meeting materials and minutes; distribution of materials including posting on the project website.

2.2 Project Coordination

The Consultant will establish a coordination mechanism with other related ongoing projects, studies, and planning efforts. Meetings will be held with representatives of these projects to coordinate plans where the projects overlap. At minimum these projects will include:

- The Urban Ring DEIS
- Lechmere Station Relocation / Northpoint Development
- Rt. 28 / McGrath Highway reconstruction
- Somerville Avenue reconstruction
- Union Square Transportation Improvements Final Design
- Somerville Community Path
- Minuteman to Mystic Valley Parkway Path

The Consultant will establish a coordination mechanism with MBTA Operations and the MBTA Design Department. Meetings will be held with representatives of these departments as necessary to keep the MBTA informed and receive feedback on operational and design decisions.

The Consultant will meet with other state and local public agencies, as necessary, throughout the project on issues which may come under the jurisdiction of, or would otherwise impact, those agencies.

2.3 Public Informational Meetings

The Consultant will assist EOT Planning in coordinating Project Advisory Working Group, Sub-Group, and other public informational meetings in the cities of Cambridge, Somerville and Medford. The Consultant will also assist EOT Planning in coordinating two public hearings on the Draft EIR. This task includes arranging a site for the public hearing, display ads and other public notification, court reporter/transcript, sign-in sheets, etc. The number of meetings of

each type is estimated below. The number of meetings may be modified by EOT Planning as needed, while keeping within the approximate total number of meetings indicated.

- ❒ Project Advisory Working Group Meetings (20 meetings)
- ❒ Sub-Group Meetings (20 meetings)
- ❒ Public Informational Meetings (8 meetings)
- ❒ Attendance at informal neighborhood meetings (30 meetings)
- ❒ Special briefings with local officials (8 meetings)
- ❒ DEIR Public Hearings (2 meetings)
- ❒ Attend pre-meeting coordination and strategy planning sessions with EOT Planning, as required

2.4 Project Web Site

Central to the planning process will be a website dedicated to the Green Line Extension project. EOT Planning has retained Neighborhood America to develop, launch, and host the website for this project. The Consultant will be responsible for supporting EOT Planning and the vendor in providing content that supports the goals for the website. The Consultant is also expected to monitor the website closely and use it as a tool for managing the public outreach process. EOT Planning expects that public comments – whether received through the project website or from another source – will inform the development of the final products of this project.

Any materials prepared for and posted to the website associated with this project must be developed in accordance with Section 508 of the Rehabilitation Act, which requires that electronic information be made accessible to people with disabilities.

Task Deliverables:

- ➢ Agendas and meeting minutes
- ➢ Meeting notices
- ➢ Newsletter (4 editions)
- ➢ Meeting handouts & graphics
- ➢ Materials for the project web site

TASK 3: REFINEMENT OF ALTERNATIVES

Objective:

- ➢ Refine the definitions of the No-Build and four build alternatives in accordance with the Secretary of Environmental Affairs Certificate Number 13886, dated December 1, 2006 and based on public input obtained through the state environmental scoping process, and additional input obtained through the Task 2 Public Outreach process.

Work Elements:

An Alternatives Analysis will be conducted for a set of alternatives consisting of:

1. No-Build Alternative
2. Green Line Extension to Medford Hillside with Spur to Union Square
3. Green Line Extension to Mystic Valley Parkway with Spur to Union Square
4. Green Line Extension to Medford Hillside with Spur to Union Square via Somerville Avenue
5. Green Line Extension to Mystic Valley Parkway with Spur to Union Square via Somerville Avenue

Planning for the Medford and Union Square components will occur concurrently. In the event that one of the components proves significantly more complex than the other with the result of delaying the entire project, then EOT will consider advancing each of the components separately.

Prior to conducting the analysis of alternatives, identification of beneficial and negative impacts, and evaluation of the alternatives described in Task 4, the alternatives must be refined as described in Task 3. Elements of Task 4 and Task 6 will also be required to complete the refinement and analysis of alternatives.

3.1 Guidelines for Refinement of Alternatives

The Consultant will establish guidelines to be used in the refinement of alternatives. All such guidelines must be approved by EOT Planning before being applied.

3.1.1 Station Location Criteria

Establish criteria for selecting station locations. These criteria are to be used in reviewing proposed station sites and comparing options. Criteria should support the ridership goals and other objectives of the project and, at a minimum, reflect operational and maintenance needs, construction costs, environmental impacts, land use compatibility, and community concerns.

3.1.2 Station Access Elements

Through the public outreach process, establish elements to be included to provide access to each station. These elements are to be used in developing station design criteria. Access modes will include pedestrian, bicycle, kiss-and-ride, bus, and taxi. Long term parking will not be included. Elements could include sidewalks, bus lanes, drop-off areas, taxi stands, car-sharing spaces, parking restrictions, bike racks, ramps, pedestrian overpasses, accessibility features, lighting, wayfinding and station signage, and other facilities. Elements needed to maintain vehicular traffic flow and safe bicycle and pedestrian access on adjacent streets should also be considered,

although some elements may be outside the jurisdiction of EOT/MBTA.

3.1.3 Bikeway/Pathway Guidelines

Research guidelines used elsewhere regarding the possibility of locating bikeways and pedestrian pathways along active rail rights-of-way. Recommend guidelines for the project regarding the location of such pathways. Guidelines should include elements needed for the safe separation of bicycle/pedestrian traffic from light rail and commuter rail tracks and vehicles.

3.2 Refinement of Alternatives

The four build alternatives will be refined through the public process and in accordance with the Certificate of the Secretary of Environmental Affairs on the Expanded Environmental Notification Form (EENF) for the Green Line Extension. All build alternatives will comply with the most recent amendments to the Statewide Implementation Plan for air quality. The alternatives will be refined through the public outreach process. The goal will be to refine the alternatives such that few, if any, variants will need to be analyzed as part of the Alternatives Analysis. The Consultant will conduct operational analyses, environmental analyses, conceptual engineering, and preliminary track design at an appropriate level of detail to support an analysis of the relative costs, benefits, and impacts of the options within each alternative. The transportation and environmental impacts considered may include Green Line, bus and railroad operations, ridership, traffic, air quality, noise and vibration, land utilization, wetlands, stormwater, hazardous materials, historic and archeological resources, parklands, environmental justice, and construction impacts, to the extent necessary to determine the most appropriate elements to be included in each alternative.

3.2.1 Identify Impacts of Commuter Rail Track Realignment

By conducting the track design specified in Task 6.4.2 and other conceptual engineering as needed, identify the bridge replacements and modifications necessitated by the eastward realignment of the Lowell Line commuter rail track to accommodate the Green Line within the right-of-way. Identify the real estate acquisitions required by the track realignment and by the bridge replacements and modifications. Examine three alternatives for the northern terminus of the realignment of the commuter rail:

- On line south of the Winthrop St. bridge
- On line south of the North St. bridge
- On line south of the Mystic Valley Parkway bridge

Examine two alternatives for the southern extent of the relocation of the commuter rail:

- On line in the vicinity of McGrath Highway

- On line after passing Yard 8

3.2.2 Refine Northern Section (north of Harvard St.) - Medford Hillside Alternative

Determine station locations between the vicinity of Winthrop St. and Harvard St. Identify the impacts of options consisting of two Green Line stations (College Ave. and Winthrop St.), one station at College Ave., and one station between College Ave. and Winthrop St. Evaluate the viability and potential impacts of a possible commuter rail station at Tufts. Using the bikeway/pathway guidelines, evaluate the viability and potential impacts of including a community path in this section of the project area. At the end of the line, identify locations for storage and layover space for Green Line vehicles, a lobby building for MBTA personnel, and parking for supervisory and maintenance vehicles. Conduct Green Line track design and develop critical sections sufficient to determine impacts of these options on bridge replacement needs, real estate acquisitions, stormwater, noise, and other distinguishing environmental factors. Determine impacts of bridge replacements on adjacent areas. Develop a single plan with a Medford Hillside terminus to be used in Alternatives 2 and 4.

3.2.3 Refine Mystic Valley Parkway Alternatives

Develop a separate alternative extending the Medford Hillside Alternatives to Mystic Valley Parkway. This alternative should be designed to avoid impacting the Mystic Valley Parkway or adjacent parklands. Determine the necessary commuter rail and Green Line track alignment and station location for an additional station before Mystic Valley Parkway. At the end of the line, identify locations for storage and layover space for Green Line vehicles, a lobby building for MBTA personnel, and parking for supervisory and maintenance vehicles. Using the bikeway/pathway guidelines, consider options for providing pedestrian connections to the West Medford commuter rail station and evaluate the viability and potential impacts of including a community path in this section of the project area. Determine the impacts of any options on bridge replacement needs, real estate acquisitions, and other distinguishing environmental factors. Develop a single plan for a Mystic Valley Parkway terminus to be used in Alternatives 3 and 5. Document the reasons for the elimination of the Mystic River crossing from the alternatives previously considered in the Beyond Lechmere Northwest Corridor Study.

3.2.4 Refine Central Section (Harvard St. to McGrath Highway)

Identify bridges needing replacement due to commuter rail realignment. Refine the three station locations between Harvard St. and McGrath Highway. Identify the need for, and if necessary alternatives for, the replacement of the freight track between Cedar St. and Walnut St. Evaluate the viability and potential impacts of a possible commuter rail station at Gilman Square. Identify issues needing coordination with planning for the Urban Ring and coordinate with the Urban Ring project to identify possible resolutions to such

issues. Conduct Green Line track design sufficient to determine the impacts of options on bridge replacement needs, real estate acquisitions, and other distinguishing environmental factors. Using the bikeway/pathway guidelines, identify whether the Community Path can be accommodated within the right-of-way and under existing or reconstructed bridges south of Lowell St. Identify any obstacles and evaluate alternative routes where the path cannot be accommodated. Evaluate the viability and potential impacts of including a community path north of Lowell St. Determine impacts of bridge replacements on adjacent areas. Develop a single preferred plan for this segment to be included in all build alternatives.

3.2.5 Refine Southern Section (south of McGrath Highway) and Maintenance and Storage Facility Location

Identify options for maintaining freight rail connections between the Lowell Line and Mystic Yard. Using the recommended bikeway/pathway guidelines, identify whether the Community Path can be accommodated within the right-of-way. Identify any obstacles and evaluate alternative routes where the path cannot be accommodated. Identify and analyze up to three alternative locations for the Green Line maintenance and storage facility and identify mitigation measures for each. Refine the location of the Washington St. Station. Identify the impacts of adding a station in the Brickbottom area and/or combining it with the Washington St. Station. Conduct Green Line mainline and storage track design sufficient to determine the impacts of options on bridge replacement needs, real estate acquisitions, and other distinguishing environmental factors. Develop a single preferred plan for this segment to be included in all build alternatives.

3.2.6 Refine Two Union Square Alternatives

Develop two alternatives for the Green Line spur to Union Square. One alternative will consist of a double track Green Line alignment using the Fitchburg commuter rail right-of-way (Alternatives 2 and 3). The second will make use of Somerville Avenue in at least one direction (Alternatives 4 and 5). For each alternative, identify the location of the Union Square Station. At the end of the line, identify locations for storage and layover space for Green Line vehicles, a lobby building for MBTA personnel, and parking for supervisory and maintenance vehicles. Identify issues needing coordination with planning for the Urban Ring, Union Square re-design, and McGrath Highway reconstruction and coordinate with those projects to identify possible resolutions to such issues. Identify options for the junction of the two Green Line branches. Identify whether the Community Path can be accommodated through the junction area and evaluate alternative routes for the path. Identify options for maintaining freight rail connections between the Grand Junction and Mystic Yard. Conduct Green Line track design sufficient to determine the impacts of options on bridge replacement needs, real estate acquisitions, commuter rail yard operations, freight operations, vehicular traffic

and other distinguishing environmental factors. Planning for the Green Line extension to Union Square components will be done concurrently with the planning for the components of the Green Line extension to Medford. In the event that one of the components proves significantly more complex than the other with the result of delaying the whole project, then consideration should be given to advancing the components separately.

3.2.7 Evaluate Commuter Rail to Green Line Connections

Consider options to provide a connection for transfers between the Lowell commuter rail line and the Green Line including a new commuter rail stop at Tufts University or Gilman Square. This evaluation should consider the benefits and potential impacts of such a connection. Impacts considered must include changes to Green Line and commuter rail operations, the Green Line alignment, station locations, real estate acquisitions, and bridge reconstruction, as well as environmental impacts. If such a connection is found to be feasible and beneficial, it may be evaluated as a variant to one or more of the alternatives.

3.3 Definition of Alternatives Report

The definition of the No Build Alternative and the results of the refinement of the four build alternatives will be assembled into a report. The report will describe the process by which refinements were developed in Task 3.2 and will describe each of the alternatives in sufficient detail to begin the Alternatives Analysis.

Task Deliverable:

- Definition of Alternatives Report

TASK 4: ALTERNATIVES ANALYSIS

Objectives:

- Conduct an Alternative Analysis for the five alternatives refined during Task 3.

Work Elements:

An Alternatives Analysis will be conducted for the No Build and four build alternatives refined in Task 3 and described in the Definition of Alternatives Report. It is anticipated that the alternatives will have been sufficiently refined such that few, if any, variants will need to be evaluated as part of the Alternatives Analysis. The Consultant will conduct operational analyses, environmental analyses, conceptual engineering, and preliminary track design at an appropriate level of detail to support an analysis of the relative costs, benefits, and impacts of each alternative. The analysis will Include, at a minimum, the following transportation and environmental impacts: Green Line, bus and railroad operations; ridership; traffic; air quality; noise and vibration; land use; wetlands; stormwater; hazardous materials;

historic and archeological resources; parklands; environmental justice; and construction impacts, to the extent necessary to evaluate the alternatives.

4.1 Green Line Operational Analysis

Conduct an operational analysis of the Green Line extension based on existing operational and ridership data available from the MBTA and the Central Transportation Planning Staff (CTPS). For each alternative, develop and analyze a single operational concept. Reassess the operational concepts in concert with ridership projections to optimize service reliability and ridership potential. Based on the analysis, develop a refined operational concept for each alternative. The analysis will identify the following attributes:

- Vehicle running times
- Service frequencies
- Train lengths
- Peak and total fleet requirements
- Daily and annual vehicle hours of service
- Vehicle maintenance window requirements
- Operational capacity requirements
- Infrastructure needs to support the operating plan (including signal, communications, and power systems)
- Potential vehicle/service conflict points
- Operational feasibility at terminal stations
- Operational impacts on the future No-Build transportation system
- Potential impacts on ridership and operational capacity in the Central Subway to identify potential changes to the existing system, i.e., signals, trolley priority control, turn-back and crossover locations.

4.2 Bus Operational Analysis

Document the existing bus network in the corridor including MBTA and any privately operated services. For each alternative, propose changes to the surface bus network (which may include both MBTA and shuttle services) to support the introduction of Green Line service. Changes should be designed to maximize transit ridership while maintaining the quality of bus service for local trips within the corridor. Identify new routes, changes in routes and headways and increases/decreases both in fleet requirements and in daily and annual vehicle-hours of service. Identify routes and peak hour bus volumes serving each station, as well as the need for new bus stop and layover facilities.

4.3 Railroad Impact Analysis

The Consultant will analyze the impacts of the project on the existing freight rail and commuter network and develop solutions to maintain connections to Mystic Yard and minimize impacts on the operations of the Boston Engine Terminal.

4.3.1 Existing Conditions

Perform research to identify the existing freight operators, freight facilities, and freight operations that will be impacted by the project. The existing conditions should be documented in a report describing the current freight operations. The report should include schematic track diagrams with appropriate length of tracks, passing sidings, and storage tracks identified along with accepted freight industry names. Commuter rail trackage, connections and facilities should also be included in the schematic track diagrams.

4.3.2 Freight Rail Impacts

Conduct an analysis of the impacts on freight operations and facilities of the options for maintaining the connections to the Mystic Yards from the Lowell Line and from the Grand Junction. If possible, options should be designed to avoid shifting railroad freight traffic to trucks. Identify what services will be affected and whether changes will result in increased truck traffic and whether those changes will affect air quality or traffic patterns. For each option, determine the associated impacts to existing freight facilities and operators and develop schematic track diagrams showing how the impacts will be addressed. Identify constraint areas where detailed track designs will need to be performed to verify assumptions made in developing the alternative schematic track designs.

4.3.3 Commuter Rail Impacts

Conduct an analysis of the impacts of the options and alternatives on commuter rail operations. (This will include the addition of a commuter rail station in the study area if one is included in the alternatives as a result of Sub-Task 3.2.) Identify the impacts on commuter rail operations of the options to maintain freight connections to Mystic Yard, including impacts on the operation of the Boston Engine Terminal.

4.4 Traffic Impact/Access Study

The Consultant will prepare a Traffic Impact/Access Study (TIAS) for the extension of the Green Line. The purpose of this study is to identify improvements in traffic operations resulting from increased transit usage, as well as to identify any negative impacts of increased traffic around the stations. The purpose is not to mitigate long-standing congestion or local parking problems, but rather to identify specific impacts and benefits of the Green Line project. The intersection analysis included in the traffic study will include the 33 intersections specified in the EENF certificate and up to five additional intersections that may be identified during the course of the project. The TIAS will also encompass intersections and roadways immediately adjacent to the stations that may be critical to providing station access.

4.4.1 Base Data Collection and Traffic Volume Networks

The Consultant will collect traffic, crash, parking and development project information in order to produce existing traffic volumes for each intersection. The following steps are necessary to complete this task:

Traffic and Pedestrian Counts

The Consultant, through a vendor, will conduct the following traffic and pedestrian counts at each intersection. The following will be conducted:

Automatic Traffic Recorder (ATR) Counts - for a 24-hour period (minimum) on a typical Tuesday, Wednesday, and/or Thursday. Counts will be conducted on each approach at the project intersections.

Turning Movement Counts (TMC) – Turning movement and pedestrian counts will be conducted at each of the intersections for the AM peak period (7:00 AM to 10:00 AM) and PM peak period (3:00 PM to 6:00 PM).

Accident Data

The Consultant will research accident records, including pedestrian and bicycle incidents, for each project intersection from municipal and/or state records for the most current three years available.

Intersection Geometrics and Traffic Control

The Consultant will collect intersection geometrics and traffic control data for each intersection.

Existing Condition Traffic Networks

The Consultant will develop existing weekday morning and evening peak hour intersection traffic volumes and turning movements. This information will serve as the baseline information for future traffic assessments on the area roadways. Pedestrian volumes at key locations will also be identified. This data will be provided to CTPS for calibration of their traffic model.

Existing Parking Inventory and Utilization

The Consultant will inventory on-street parking regulations and the number and mid-day utilization of on-street parking spaces within 500 feet of proposed station entrances. Any public off-street parking facilities should also be included in the inventory.

Development Projects

The Consultant will review future site-specific developments in the vicinity of the proposed stations by contacting planning officials for the Cities of Somerville, Cambridge, and Medford. Through these consultations, the Consultant will determine which, if any, currently permitted projects may affect the transportation infrastructure, traffic volumes, and parking supply. The Consultant will provide data on

permitted developments to CTPS to insure that such developments are represented in the CTPS model.

4.4.2 Project Impact Analysis

The Consultant will use data provided by CTPS, in combination with the information assembled in Task 3.7.1 to analyze and document both the positive and negative the traffic impacts of the proposed project. The following steps will be completed:

Traffic Volume Impacts

Approach volumes projected by the CTPS model for each intersection will be obtained for the base year, future No Build, and future Build conditions for each alternative. The Consultant, in consultation with CTPS, will develop any adjustments to the base year turning movements that may be appropriate for the build alternatives, taking into account the proximity of Green Line stations and the projected number of auto access trips to those stations. Bus volumes will be added based on the modified bus routes developed in Task 3.5. For each intersection, pedestrian volumes associated with Green Line access will be estimated from CTPS station access mode projections. The existing traffic volumes, projected changes in approach volumes, modified turning movements, bus volume, and pedestrian volume data will be used in the intersection analyses for each alternative.

Level-of-Service Analysis

The Consultant will prepare and document the vehicular level of service (LOS) and volume-to-capacity ratios for the study area roadways and intersections for the future No Build and each Build alternative. These estimates will be prepared for both the weekday morning and weekday evening peak hours. Pedestrian level-of-service will also be calculated at key locations under the future build scenarios. Both positive and negative impacts on traffic LOS will be identified. In areas where significant negative impacts at multiple intersections are projected to result from the project, appropriate mitigation measures will be recommended. Mitigation measures will only be developed to relieve negative impacts that are a direct result of the Green Line Extension, and not to relieve long-standing congestion and local parking problems.

Station Area Circulation

While developing the design for each station, the Consultant will develop traffic circulation plans for each station including estimated AM and PM peak hour volumes of station-related automobile, bus, and pedestrian trips. Bicycle routes will also be shown on the plans.

4.5 Air Quality

The air quality study will include a mesoscale (regional) and microscale (local) analysis. The analyses should analyze the following emissions: VOC, NOx, greenhouse gases, carbon monoxide, particulate matter (PM) and air toxics. The mesoscale analysis will

include private vehicle, bus, and train emissions for the corridor. The vehicle emissions will be based on CTPS ridership projections prepared for all alternatives for the project. The commuter rail train emissions will be based upon EPA's latest train emission rates and train operations. This analysis will evaluate the regional air quality impacts from the proposed project. The results will be incorporated into the environmental document to determine if the proposed project conforms to the State Implementation Plan (SIP), MassDEP's Transit Regulations, and the 1990 Clean Air Act Amendments (CAAA).

The air quality study will include a microscale analysis to determine if the proposed project conforms to the SIP and the CAAA. A modeling protocol will be prepared for Department of Environmental Protection to review and comment. The microscale analysis should examine localized carbon monoxide (CO) conditions and identify hot spots related to traffic congestion near each proposed station and maintenance area. Up to 15 intersections will be modeled. The intersections included in the traffic study will be ranked based upon level-of-service and total traffic volumes. The intersections ranked the highest for each parameter will be modeled. The results will be compared to the National Ambient Air Quality Standards. If any CO violations are predicted, mitigation measures will be developed and tested that meet the SIP and CAAA criteria.

4.6 Noise and Vibration

The Consultant will conduct a noise and vibration assessment to determine impacts along the project corridor from Lechmere Station to the proposed northern terminus and the Union Square Station site. The noise and vibration impact assessment will be prepared in accordance with the Federal Transit Administration's (FTA) guidelines contained in their Transit Noise and Vibration Impact Assessment manual (April 1995). The FTA guidance manual sets forth the basic concepts, methodology, impact criteria, and procedures for evaluating the extent and severity of noise and vibration levels from transit projects at sensitive receptor locations along the project corridor.

The noise and vibration impact assessment will include baseline measurements to determine the existing conditions along the project corridor. The measurement program will consist of identifying sensitive receptors along the project corridor, and selecting representative measurement locations. Up to a total of 15 measurement locations will be selected along the project corridor. The measured noise levels will be used to determine the existing conditions along the project corridor, and to establish the FTA criteria noise limits that will be used to determine project impacts. For residential receptors, the FTA guidelines require that 24-hour period Ldn noise levels be used. For institutional receptors, the FTA guidelines require that peak-hour Leq(h) noise levels be used to determine the existing conditions.

Using information such as the number of rail cars per train consist, the speed of the trains along the project corridor, and the number of daytime, nighttime and peak-hour operations, the FTA noise model will be used to calculate the project related noise levels at sensitive receptors along the project corridor. The FTA vibration model will be used to predict vibration levels from the proposed transit operations along the project corridor. The predicted noise and vibration levels from the proposed project will be compared to the FTA criteria to determine impact. Where impact conditions are expected to occur, appropriate mitigation measures will be recommended.

4.7 Land Use

The Consultant will quantify the amount of land to be altered in each alternative, the amount of earth work involved in meeting final grades and the amount of impervious surfaces created. The Consultant will investigate all feasible methods of avoiding, reducing, or minimizing impacts to land and of reducing impervious surfaces. Real estate acquisitions, permanent easements, and temporary construction easements needed for each alternative will also be identified.

4.8 Wetlands/Water Quality/Stormwater

Based on data collected during preparation of the Beyond Lechmere Northwest Corridor Study and the EENF, and inspection of aerial photographs, it appears that there are no wetlands or waterways present along the proposed corridor or at station sites. Field reconnaissance and map reviews, supplemented by coordination with DEP, will determine if any areas subject to Chapter 91 would be within the project area. The Consultant will research aerial photography and conduct a field visit at the site of the proposed maintenance and storage facility (to be identified); to determine if wetlands and waterways (including other wetland resource areas such as floodplains or Riverfront Area) would be affected by the build alternatives.

The Consultant will determine impacts and compliance with regulatory performance standards; and identify mitigation measures, where required; identify potential discharges of stormwater from the build alternatives; determine if mitigation measures (BMPs) are feasible; and document compliance with the Massachusetts Stormwater Policy.

This scope assumes, based on available mapping and the conceptual alignment of the Preferred Alternative presented in the EENF, that the preferred alternative would not affect wetland resource areas subject to state or federal jurisdiction.

Based on this investigation, the Consultant will:

- ❒ Identify the list of permits, licenses and approvals required for construction of the alternatives.

- Prepare list of environmental permits and licenses likely to be required for operations, particularly for the maintenance and storage facility.

4.9 Hazardous Material

A Phase I ESA will be conducted for each of the six to nine station sites and the maintenance and storage facility. EOT Planning will arrange for access to the sites. This work will include the following:

- Review site history to identify previous ownership, previous site usage, storage and disposal of oil and hazardous materials on or adjacent to the site, and identify other evidence of potential environmental impacts.
- Review available documents at municipal offices to help confirm ownership and usage history for the proposed station site. Department of Environmental Protection (DEP) files will be reviewed to identify reported releases of oil or hazardous materials at or adjacent to the site. The Consultant will review DEP databases to determine whether any confirmed release sites exist in the vicinity of the site.
- Interview Fire Department personnel and, if available, review inventories of underground storage tanks to determine if tanks presently are, or previously were located on or adjacent to the station site.
- Perform a computer database search of federal files, including the current Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS; 40 CFR 300-399) list, Resource Conservation and Recovery Act (RCRA; 40 CFR 200-299) sites within a ¼-mile radius of the station site, and the DEP list of hazardous waste sites to be investigated, currently under investigation, or closed.
- Site reconnaissance to examine the station site for overt evidence of releases or threats of releases of oil or hazardous materials, and to observe the uses of abutting properties.
- The assessment of hazardous materials will be compiled in a Phase I ESA Report that will summarize site observations and results of the record review and site histories, and provide a discussion of identified and suspect environmental conditions. The report will also make recommendations for any additional investigations that may be required.

4.10 Historic and Archaeological

This task includes the assembly of information required under MGL Chapter 254 (950 CMR 71) and the Massachusetts Environmental Policy Act (MEPA). Tasks will consist of identification and mapping of previously designated and inventoried above-ground and archaeological resources and documentation and evaluation of resources not previously designated or inventoried within the study area. All buildings, structures, sites, and objects that were built prior

to 1960 will be examined. Assessment of impacts on historic properties and proposed mitigation measures will also be carried out.

The Massachusetts Historical Commission's (MHC's) Inventory of Historic and Archaeological Assets of the Commonwealth Recommendations regarding eligibility will be made to the MHC, which will provide the official determination. Inventory of Historic and Archaeological Assets of the Commonwealth, State Register of Historic Places, National Register of Historic Places, and MHC archaeological files will be reviewed for Cambridge, Somerville and Medford within the study area to identify previously inventoried and designated above-ground and archaeological resources at the station sites and other areas where demolition or ground disturbance is proposed as part of the project. Above-ground resources within 125 feet on either side of the proposed track will also be identified to assess impacts from vibration or change in setting. Research will also be conducted at the preservation agencies in Cambridge, Somerville, and Medford to identify any other properties that may have a local designation or been previously inventoried. All previously identified above-ground and archaeological resources will be mapped in GIS.

Research and fieldwork will be conducted to identify above-ground and archaeological resources built before 1960 within the study area that were not previously designated or inventoried. Research will consist of a review of older maps, histories, and other archival sources. Fieldwork for above-ground resources will involve photography and documentation of architectural and physical characteristics. Fieldwork for archaeological resources will initially involve limited testing to determine the presence of archaeological resources. Prior to archaeological fieldwork, a State Archaeologist's permit will need to be obtained from the MHC. Further phases of fieldwork may be required to determine boundaries and eligibility of identified archaeological resources. All resources documented during fieldwork will be mapped in GIS.

Impacts to above-ground and archaeological resources that are listed or eligible for the National Register will be evaluated, taking into consideration direct construction impacts, vibration impacts with the potential to cause structural damage, and changes in setting that adversely affect the resource. If adverse effects are identified, the Consultant will identify mitigation measures in consultation with the MHC.

A Historical/Archaeological Technical Memorandum will be prepared.

4.11 Public Parks, Recreation Areas, and Conservation Land

The Consultant will inventory public parks, recreation areas, and conservation lands within 100 feet of the proposed transit corridor and stations, using GIS-based data, information from DCR, and information provided by the municipalities of Somerville and Medford.

Each area will be shown on the project mapping and graphics. Impacts to each property, as a result of proximity (change in access), temporary construction impacts (including staging), or acquisition of land for stations, tracks, bridge construction, or maintenance and storage facility, will be identified and evaluated in the DEIR. Any changes in use that would require approval of the legislature under Article 97 will be identified. This task includes two (2) meetings with DCR to review the proposed project, impacts (if any) and potential mitigation measures.

4.12 Ridership

The Consultant will coordinate with CTPS to provide input, including station locations, traffic, and Green Line operations data, for CTPS to develop ridership projections for the No-Build and build alternatives. EOT Planning will enter into a separate contract with CTPS to conduct the ridership analysis.

A Ridership Technical Memorandum will be prepared by CTPS that documents the assumptions used to generate the ridership. The Consultant will use the CTPS projections to produce estimates of ridership and vehicle-miles of travel for each alternative. The VMT estimates should identify whether the reductions are based on new or diverted trips. Ridership estimates should include estimates of ridership by station and by access mode. Changes in ridership and station boardings/alightings in the Central Subway, on the commuter rail lines and on local bus routes will also be documented.

4.13 Environmental Justice

The EOEA Policy identifies a number of services to be provided to EJ Populations by state agencies including: Increasing Public Participation/Outreach, Minimizing Risk to EJ neighborhoods, Encouraging Investments, and Infusing State Resources. The project will identify EJ communities based on US Census data, the Beyond Lechmere Northwest Corridor Study, and information provided by the Cities of Somerville, Cambridge, and Medford. Adjustments will be made to remove the transient student population from the identification process. The Consultant will document the project's support of EJ Communities by identifying and contacting business and organizational groups that represent the EJ populations, advertising project meetings and information in local papers, translating project fact sheets, and identifying ways the project can foster growth in the EJ communities. These efforts will be documented in the DEIR.

The Consultant will illustrate how the project is designed to provide fair access to economic opportunities. The Consultant will make use of CTPS provided Mobility and Accessibility Analyses to identify the mobility benefits and accessibility to jobs and educational opportunities provided by the project to EJ and other communities in the study area. The Consultant will also illustrate how the project is designed to provide fair access to stations and avoid any

disproportionate share of environmental impacts in EJ communities. This will include impacts resulting from the location of stations, station entrances and the maintenance and storage facility. It should also included impacts resulting from increased traffic and from local bus service changes. The Consultant should identify appropriate mitigation measures where disproportionate impacts are identified.

4.14 Planning Consistency

The Consultant will examine previous and ongoing planning efforts in the project area. The Consultant will analyze these plans and assess the consistency of those planning projects with the Green Line Extension Project. This information will be documented in the DEIR.

4.15 Section 61

Based on the Preferred Alternative, a Section 61 Finding will be prepared outlining the mitigation commitments associated with the project. Coordination with the Cities of Cambridge, Somerville, Medford, MHD and MBTA will be required.

4.16 Project Schedule

The Consultant will develop a schedule of major milestones for the FEIR; preliminary and final design; bridge, commuter rail, Green Line, and maintenance facility construction; vehicle procurement and testing; and opening date for revenue service.

4.17 Construction Impacts

Based on the conceptual design plans, the Consultant will identify potential construction impacts relating to the construction of the tracks, retaining walls, stations and associated facilities, the maintenance and storage facility, utility line and substation relocations, intersections, bridges and associated roadways, and potential means for mitigation. Construction impacts on commuter rail, freight, Green Line and local bus operations will be identified, as well as impacts on traffic operations and environmental impacts. The Consultant will identify feasible mitigation measures for construction impacts, including measures to alleviate dust, noise, odor and other nuisance conditions (including rodent control).

4.18 Cost Estimate

The Consultant will prepare a Conceptual Construction and Operating and Maintenance (O&M) cost estimate for each alternative. Construction costs should include, at a minimum, the commuter rail, freight, and Green Line track and supporting infrastructure, the maintenance and storage facility, all stations and supporting facilities, reconstructed and modified bridges and roadways, any portion of the Community Path included in the project, and any mitigation measures deemed necessary. Operating costs should include changes in Green Line, commuter rail, and bus operating costs.

4.19 Project Funding

The Consultant will document proposed project funding sources as specified by EOT Planning.

4.20 Alternatives Analysis Report

The Consultant will assemble the results of the analyses in each impact area into an Alternatives Analysis Report. The report will include a summary section comparing the beneficial and negative impacts of each of the alternatives. The report will also include a recommendation regarding the preferred alternative.

Task Deliverables:

- Green Line Operational Analysis memorandum
- Proposed Bus Service and Bus Operational Analysis memorandum
- Railroad Impacts Analysis memorandum
- Traffic Impact/Access Study (TIAS) memorandum
- Air Quality memorandum
- Noise and Vibration memorandum
- Land Use Changes and Real Estate Acquisitions memorandum
- Wetlands and Stormwater memorandum
- Hazardous Materials Phase I Technical Report
- Historic and Archaeological memorandum
- Ridership and Mobility memorandum to be prepared by CTPS
- Environmental Justice memorandum
- Alternative Analysis Report

TASK 5: DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)

Objectives:

- Prepare state environmental documentation (DEIR) and identify federal, state and local environmental permits approvals or submittals required.
- Identify how comments on the EENF have been addressed
- Circulate the DEIR for public comment

Work Elements:

5.1 Draft Environmental Impact Report

A Draft Environmental Impact Report will be prepared in accordance with the EOEA Secretary's Certificate on the Expanded Environmental Notification Form. The DEIR will address all points in the EIR Scope contained in the Secretary's Certificate. It is expected that the DEIR will provide a reasonably complete and stand-alone description and analysis of the project, project alternatives, and environmental impacts, and will adequately address mitigation, such that the DEIR may be reviewed as, and be deemed adequate by MEPA as, a Final EIR for the project. Five draft copies of the DEIR will be submitted to

EOT Planning for review and approval prior to completing the final DEIR. The DEIR will contain the following:

- ❒ Table of Contents
- ❒ Executive Summary
- ❒ Project History
- ❒ Description of the existing environment (land use, transportation systems, social, economic, cultural, including Environmental Justice areas)
- ❒ Description of the alternatives considered
- ❒ Description of the refinements made to station locations and to the alternatives, and the options rejected
- ❒ Description of the rationale for selection of the Preferred Alternative (proposed action)
- ❒ Description of the proposed action, including:
  - ❒ Track alignment and supporting structures
  - ❒ Bridge replacements/modifications
  - ❒ Station location and conceptual design
  - ❒ Station access and circulation (automobile, bus, bicycle, and pedestrian)
  - ❒ Maintenance and storage facility location and conceptual design
  - ❒ Power, signal, and communications systems
  - ❒ Stormwater management systems
  - ❒ Green Line, commuter rail, freight rail, and bus operations
  - ❒ Project cost and funding
  - ❒ Project phasing and schedule
- ❒ Description of project impacts due to construction and operations, including changes in land, traffic, noise, vibration, air quality, wetlands, water quality, stormwater, access to businesses and residences, hazardous material, and the visual environment
- ❒ Description of how the project is designed to provide fair access and avoid a disproportionate share of impacts in EJ communities
- ❒ Status of required permits and approvals and consistency with regulatory standards
- ❒ Description of all mitigation measures
- ❒ Proposed Section 61 Findings (draft letter of mitigation commitments)
- ❒ Comment letters on the EENF, the EENF Certificate, and responses to comments
- ❒ Supporting graphics, including project location, existing conditions (sensitive receptors, environmental impacts including visual environment, historic and cultural resources, open space, traffic volumes and patterns), proposed conditions (track alignment, cross-sections, station and maintenance and storage facility design (including detailed renderings), bridge

replacements/modifications, station access and circulation, streetscape, and mitigation elements.

- ❒ Technical Appendix, noise and vibration analyses
- ❒ Technical Appendix, air quality analysis
- ❒ Technical Appendix, ridership analysis
- ❒ Technical Appendix, traffic analysis
- ❒ Alternatives Analysis Appendix
- ❒ Other Technical Appendices, as needed

5.2 EENF Comments/Responses

The Consultant will:

- ❒ Respond to Comments based on the EENF Certificate
- ❒ Prepare catalog and index of comments
- ❒ Mark comment letters with sequential numbers for each letter and comment
- ❒ Format and respond to comments on the EENF

5.3 Coordination/Meetings

The Consultant will coordinate with EOT Planning, and other agencies, regarding MEPA compliance. This task assumes 4 environmental agency meetings during preparation of the DEIR, and twenty (20) meetings with EOT Planning staff. The Consultant will prepare meeting agendas, meeting minutes and graphics for each of the meetings. The Consultant will assist EOT Planning with the coordination of public hearings on the DEIR and 5 team staff members will attend those meetings with the appropriate presentation materials.

5.4 DEIR Circulation/Copying

The Consultant will prepare a DEIR Circulation List. The DEIR will include text, all comment letters received on the EENF, responses to comments, graphics, and technical appendices as required. The DEIR will be prepared in hard copy and electronic (CD) formats. The CD's will be formatted and lined (by index) and sent for formal copying (including a CD cover).

Prior to publication and distribution of the DEIR, the Consultant will send a letter to all persons who received or commented on the EENF, stating that the document is available for review. Everyone who commented on the EENF will receive a CD version of the DEIR unless they specifically request a hard copy. The project will prepare 5 draft copies of the DEIR to EOT Planning for review. The Consultant will prepare 100 final hard copies and 250 CDs for distribution. An electronic (pdf) version will be provided to EOT Planning for the project website.

Task Deliverables:

- ➢ Draft DEIR (five hard copies)
- ➢ DEIR (hard copies 100 and 250 CDs)

TASK 6: CONCEPTUAL ENGINEERING

Objectives:

- To develop survey base mapping of existing conditions on the 4.4-mile corridor including existing utility information, station sites, maintenance and storage facility and intersections.
- To develop commuter rail track design to a level necessary to support the evaluation of bridge replacement needs and required real estate acquisitions.
- To develop freight rail track design to a level necessary to verify that connections to Mystic Yard can be maintained.
- To develop concept designs for each alternative, and options within each alternative, that are necessary to support the refinement and analysis of alternatives for the DEIR. Concept design beyond 10% may be required for some elements in order to determine the feasibility of the design and to identify significant impacts.
- To develop 10% concept designs that detail the preferred alternative including right-of-way, track, stations, maintenance and storage facility, intersections, structures, roadway, power, communications and signaling, and mitigation.

Work Elements:

6.1 Supplemental Survey

Under a separate contract, EOT Planning has engaged a survey contractor to conduct survey base mapping for the project. The survey contractor will research the existing right-of-way to sufficiently determine its location and will produce base mapping of the corridor. The survey contractor will fly the corridor and perform a ground survey to supplement the aerial mapping, as necessary for this phase of the design. The width of the mapping corridor will be a minimum of 300 ft. centered with the existing railroad bed. At sixteen (16) overhead and three (3) undergrade bridges the mapping areas will incorporate the approach roadways and adjacent intersections. The mapping will be produced electronically and suitable for 40-scale. Contours will be shown at one foot intervals. The survey contractor will perform detailed bridge survey at sixteen (16) overhead and (3) undergrade bridge locations. The survey will include field measurements to show specific bridge structure elements as needed for a bridge type study and will conform to the requirements outlined in the MHD Bridge Manual. The survey contractor's deliverables consist of base survey mapping for the entire corridor and bridge surveys on the 16 overhead and 3 undergrade bridges. These will be provided to the Consultant upon Notice to Proceed.

The Consultant will conduct the following supplemental survey subsequent to the identification of preferred station sites and intersections to be evaluated:

6.1.1 Supplemental Ground Survey

The Consultant will perform the following ground survey to supplement the aerial mapping as necessary for this phase of the design:

Borings

The Consultant will locate borings, test pits and observation wells performed by others within the 4.4 miles. For this task 300 borings, test pits and observation wells are anticipated. These locations will be added to the existing base plans.

Culverts

The Consultant will field locate up to 20 culverts with invert elevations as required by the Consultant.

Profile Verification

Cross-section checks will be performed every 200 feet and at the outer limits of overhead bridges to assure the design profile will match the existing topography to accurately calculate earthwork quantities. In addition, the top of low rail elevation will be obtained at least every 100 feet (every 50 feet in vertical curves) to verify existing aerial grades. Base plans will be adjusted accordingly for any discrepancies.

6.1.2 Station/Maintenance Facility Survey

The Consultant will use topography and base mapping for the survey requirements for the six to nine proposed stations and up to three sites for the maintenance and storage facility. It may be necessary to conduct supplemental survey at up to six proposed station sites for areas not covered in the topography (total of 40 acres – 10 acres per site) and one maintenance and storage facility. Each survey will include a property line, topographic, roadway and utility survey. Research at the municipalities, Registry of Deeds will be conducted as well as recovering and locating existing evidence of easements and or encroachments affecting the site. The Consultant will perform locations of such features as; buildings, paved areas, curbing, landscaping, wetland flags that are located within the limits of work. In addition, ground elevations will be obtained at sufficient locations to produce one- foot (1') contours.

The Consultant will perform research at the public and private utility agencies servicing the site. Existing record utilities such as gas, water, telephone, cable, electric, etc. will be obtained. All data will be added to existing conditions base plan.

6.1.3 Roadway/Intersection Survey

Survey will be obtained at up to 38 intersections for traffic mitigation design. The limits of survey will be 500 feet in each direction from the intersection. The survey will include the locations of roadway limits, curbing, underground utilities and elevations. The underground utility locations will include rim and invert elevations, pipe size, and

direction of flow (drain and sewer only). Right of Way boundaries at the roadway will be determined and shown on base plan. The Consultant will perform locations of such features as; buildings, paved areas, curbing, landscaping, wetland flags that are located within the limits of work. In addition, ground elevations will be obtained at sufficient locations to produce one- foot (1') contours. The Consultant will perform research at the public and private utility agencies servicing the site. Existing record utilities such as gas, water, telephone, cable, electric, etc. will be obtained. Research at the municipalities, Registry of Deeds will be conducted as well as recovering and locating existing evidence of easements and or encroachments affecting the site. All data will be added to existing conditions base plan.

Sub-Task Deliverables:

- Updated Base Survey Mapping for Stations
- Updated Base Survey Mapping the Maintenance and Storage
- Updated Base Survey Mapping for Intersections

6.2 Geotechnical

The Consultant will conduct the following geotechnical investigation:

6.2.1 Railroad Right-of-Way

Conduct one boring every 500 feet to depth of 10 feet for approximately 4.4 miles from a point on the relocated Green Line 1,000 feet east of the former Bridge #6 (Red Bridge), along the proposed right-of-way on the Lowell Line, to the eastern end of the bridge over Mystic Valley Parkway, and from the former Bridge #6 (Red Bridge) along the Fitchburg Line to a point just west of the Prospect Street bridge. (Total drilling: approximately 470 Linear Feet; 47 borings). If refusal is encountered before 10 feet is reached, perform a 10' rock core.

6.2.2 Bridges

There are 19 existing bridges identified in Task 6.5 that may require modifications. The Consultant will contact the Massachusetts Highway Department (or other bridge owner) to obtain any existing geotechnical data on these bridges. Four borings per bridge will be conducted to an estimated depth of either 50 feet, or refusal with a 10' rock core. (Total 3,800 Linear Feet, 76 borings) A geotechnical report will be prepared for each bridge.

6.2.3 Retaining Walls/Intrusion Barrier

Borings will be conducted at 250 feet on center for approximately 4 miles of 10 to 20 foot high retaining walls along the total alignment length of 4.4 miles. Estimated depth per boring is 40 feet. (Total 3,400 Linear Feet, 85 borings) If refusal is encountered before 40 feet is reached, perform a 10' rock core.

6.2.4 Station /Maintenance Facility

Station:

Conduct three borings per station for up to nine stations to an estimated depth of 40 feet. If refusal is encountered before 40 feet is reached, perform a 10' rock core. Station size is assumed to be 300 feet long with a single center platform 24 feet wide. (Total 1,080 Linear feet, 27 borings)

Maintenance and Storage Facility:

Conduct seven borings for a 300 by 500 foot maintenance and storage facility. Each boring is estimated to be 40 feet in depth. If refusal is encountered before 40 feet is reached, perform a 10' rock core. (Total 280 Linear Feet)

6.2.5 Groundwater Observation Wells

Ten observation wells will be installed to an estimated depth of 25 feet per well. (Total length 250 Linear Feet)

6.2.6 Geotechnical Program

The Consultant will also perform the following tasks for the geotechnical program:

- Collect and review existing subsurface information in the vicinity of the proposed 4.4 mile alignment.
- Develop a detailed subsurface exploration program for the proposed 4.4 mile alignment.
- Prepare a subsurface exploration contract and obtain bids for the proposed subsurface investigation program.
- Provide oversight of the subsurface exploration program and log borings.
- Develop a laboratory testing program to assist in selecting soil properties for geotechnical design recommendations.
- Prepare typed logs of geotechnical borings drilled.
- Prepare one Geotechnical Data Report containing boring logs and boring location plan.
- Prepare one Geotechnical Interpretive report providing Geotechnical recommendations for foundation design and retaining wall design and soil profiles for the entire alignment.
- Provide one review of the 10% foundation design drawings and specifications.
- Report obvious indications of contamination observed during drilling of the borings.
- Provide a final design Geotechnical Report for each of the 19 bridges requiring submission of sketch plans.

Sub-Task Deliverables:

- Corridor and Retaining Wall Geotechnical Report
- Bridge Geotechnical Report
- Stations/Maintenance and Storage Facility Geotechnical Report

6.3 Track Design

The Consultant will conduct the following track work:

6.3.1 Track Design Criteria

Where possible, track design criteria will be based on existing MBTA Green Line and commuter rail standards. The track design criteria shall include, but not be limited to, clearances, geometrics, utilities, and right-of-way. Where certain criteria may be restrictive, alternate minimums/maximums will be recommended for approval by the MBTA.

6.3.2 Commuter Rail Horizontal and Vertical Alignment Design

The Consultant will develop the track horizontal and vertical alignment to a design level sufficient to determine the final horizontal and vertical alignment, identify critical cross sections, identify necessary real estate acquisitions, and determine required drainage facilities and connections. Field survey information will be utilized to verify horizontal and vertical constraint points. The Consultant will prepare horizontal geometry tables. The design will consist of the realignment of the Lowell Line commuter rail track to accommodate the Green Line within the right-of-way. The realignment should meet the identified track design criteria and avoid, if possible, requiring the reconstruction of bridges that currently have sufficient horizontal clearance for both commuter rail and Green Line tracks.

Three alternatives will be designed for the northern terminus of the realignment of the commuter rail:

- On line south of the Winthrop St. bridge
- On line south of the North St. bridge
- On line south of the Mystic Valley Parkway bridge

Two alternatives will be designed for the southern terminus of the relocation of the commuter rail:

- On line in the vicinity of McGrath Highway
- On line after passing Yard 8

6.3.3 Freight Rail Horizontal and Vertical Alignment Design

Using the commuter rail horizontal and vertical design, the Consultant will develop the horizontal and vertical alignment of Mystic Yard freight track connections from the Lowell Line and the Grand Junction to the 10% design level, or in greater detail if necessary to verify the feasibility of the design. Field survey information will be utilized to verify horizontal and vertical constraint points. The Consultant will prepare horizontal and vertical geometry tables.

6.3.4 Green Line Horizontal and Vertical Alignment Design

Using the railroad horizontal and vertical designs, the Consultant will develop the Green Line track horizontal and vertical alignment to the 10% design level. Field survey information will be utilized to verify horizontal and vertical constraint points. The Consultant will prepare horizontal and vertical geometry tables.

6.3.5 Construction Plan Preparation

The Consultant will develop conceptual design alignment plans with appropriate horizontal, tangent and curve data.

Design profiles will be advanced using aerial photography. Design profiles will be presented at an appropriate scale identifying vertical curve data, proposed gradients, station equations, existing elevations and proposed grades.

In addition, the Consultant will prepare the preliminary design of the track structure. These services shall include:

- ❒ Preparation of typical track sections including preliminary material depths, section geometry and typical ditch.
- ❒ Preparation of preliminary plan location of turnouts and crossovers.
- ❒ Development of preliminary drainage designs.
- ❒ Preparation of typical track component details

Sub-Task Deliverables:

- ➢ Commuter Rail Track Design Criteria
- ➢ Green Line Track Design Criteria
- ➢ Conceptual Track Design Plans for Commuter Rail, Freight Rail, and Green Line

6.4 Signals/Communications/Power

The Consultant will conduct the following signals/communication work:

The Consultant will prepare and confirm the design criteria to be utilized. The Consultant will also develop a conceptual Traction Power System (TPS) load flow study and evaluate available MBTA traction power system equipment and existing power cable duct banks to be extended to the project area. A schematic development of power system design alternatives will be identified to meet specified service levels. The Consultant will also identify conceptual layout locations for catenary foundations, overhead assemblies, substations, aerial and underground feeders to the Overhead Catenary System (OCS) electrical jumpers and duct banks. Conceptual designs for changes to the signal and communications systems will also be developed, including required enhancements to the MBTA Operations Center.

Sub-Task Deliverables:

- Traction Power system load flow study report
- Signal, OCS and PDS Design Criteria Reports
- Conceptual signals, communications, power layouts

6.5 Structures

The Consultant will conduct the following structural work:

6.5.1 Bridges

The Consultant will prepare a type study for the replacement, rehabilitation, or modification, as necessary, of sixteen (16) overhead roadway bridges and three (3) undergrade bridges listed below, using MHD standard procedures. The Consultant will contact the Massachusetts Highway Department (or other bridge owner) to obtain any existing inspection reports on these bridges. The designs will include preliminary bridge geometry and determination of bridge substructure and superstructure types. Consideration should be given to the need to relocate utilities that are attached to some bridges that may need replacement. For the sixteen overhead bridges a type study in compliance with the Massachusetts Highway Department Bridge Manual Section 2.3 will be completed and submitted to MHD for review and approval. Design will also include 10% roadway approach design for overhead bridges including horizontal and vertical graphic and typical sections.

The following bridges are to be included:

<u>New Hampshire Main Line Track (Lowell Line)</u>

- Washington Street (Undergrade)
- Cross Street (Overhead)
- McGrath Highway (Overhead)
- Walnut Street (Overhead)
- Medford Street (Overhead)
- School Street (Overhead)
- Sycamore Street (Overhead)
- Central Street (Overhead)
- Lowell Street (Overhead)
- Cedar Street (Overhead)
- Broadway (Overhead)
- Harvard Street (Undergrade)
- College Ave (Overhead)
- Winthrop Street (Overhead)
- North Street (Overhead)

<u>Fitchburg Main Line Track</u>

- McGrath Highway (Overhead)
- Medford Street (Undergrade)
- Prospect Street (Overhead)

- Webster Ave (Overhead)

6.5.2 Pedestrian Overpasses

The Consultant will prepare 10% conceptual design plans for up to six pedestrian overpasses at station sites using previous MBTA Pedestrian Overpass design plans as a prototype for design. Bridges will be designed to accommodate pedestrians and bicycles only. Location of abutments will be coordinated with track layout. Abutments will be assumed to be supported on spread footings. Preliminary design will include geometry, substructure, superstructure, and estimates.

6.5.3 Retaining Walls/Intrusion Barriers

The Consultant will identify and evaluate existing retaining walls along the corridor. The Consultant will provide EOT Planning with a report summarizing their condition, and recommendations for rehabilitation and/or replacement. Intrusion barriers are required between the commuter rail and Green Line throughout the alignment. Intrusion barriers may be necessary between the Green Line and Community Path. Retaining walls in some areas may need to be designed to accommodate the Community Path above. The Consultant will prepare 10% conceptual design plans and estimates for all new or reconstructed retaining walls and barriers. The Consultant should consider alternatives to construction of concrete retaining walls that could retain trees and vegetation while minimizing noise, vibration and stormwater impacts.

6.5.4 Culverts Inventory and Assessment

The Consultant will perform document research, inventory, inspection and evaluation for approximately 20 culverts. Their locations and sizes are unknown and will need to be inventoried and assessed as part of this Design Phase. Upon completion, the Consultant will provide EOT Planning with a report summarizing the culverts along the corridor, their condition, recommendations for rehabilitation and/or replacement, and estimate.

Sub-Task Deliverables:

- Conceptual Structural Design Plans
- MHD Type Study Reports for Overhead Bridges
- Conceptual Design of Retaining Walls and Intrusion Barriers
- Report on Culverts

6.6 Stormwater Systems

The Consultant will develop an overall drainage plan for the project consistent with the DEP Stormwater Management Policy. The plan should make use of existing stormwater management systems, whenever possible, but must demonstrate that source controls, pollution prevention measures, erosion and sediment controls and the drainage system will comply with the DEP Stormwater Management

Policy and standards for water quality and quantity both during construction and post-development. Develop an operations and management plan to ensure long-term effectiveness of the stormwater management system.

Sub-Task Deliverables:

- Conceptual Drainage System Plans
- Operations and Management Plan for Stormwater Systems

6.7 Utility

Coordinate and attend meetings with public and private utility companies to establish relocation and/or modification procedures for existing utilities compatible with proposed design. Conduct conceptual design and estimate of any utility line, pipeline or substation relocations. Utility investigation is identified under the survey task.

Sub-Task Deliverable:

- Conceptual Relocation Plans and for Utility Lines, Pipelines and Substations

6.8 Station Dimension and Design

The Consultant will conduct the following station design work for six to nine Green Line stations without parking. One station may include commuter rail platforms.

6.8.1 Station Design Criteria

The Consultant will prepare Station Design Criteria that will include, but will not be limited to, dimensional requirements, dimensional constraints, safety criteria, fare collection, accessibility criteria (including ADA, MAAB, and MBTA Access Guidelines), systems requirements, bus stop/drop off area design criteria, parking for maintenance vehicles, supervisory employee parking (end of line stations only), bicycle access and storage, station and wayfinding signage, lighting, furniture, other station amenities, list of applicable codes, etc. The Station Design Criteria Report will be prepared for MBTA and EOT Planning approval prior to initiating station design.

6.8.2 Architectural Program

The Consultant will develop an Architectural Program for the stations in cooperation with EOT Planning and the MBTA. Opportunities to minimize environmental impacts through the use of alternative energy sources and recycled materials should be assessed. An Architectural Program Report will be prepared for EOT Planning approval prior to initiating the station design.

6.8.3 Architectural Design Plans

The Consultant will develop 10% station architectural design plans for six to nine Green Line stations. The plans will be prepared in MBTA standard cut sheet format at a scale of 1-inch equal 20 feet.

6.8.4 Station Civil Design

The Consultant will develop 10% station site designs for six to nine stations that conform with the approved MBTA station design criteria and in accordance with the Massachusetts Architectural Access Board and ADA requirements.

6.8.5 Station Structural Design

Structural design will be required for each of the stations. All stations will include either a center island or side low level platform that can accommodate three-car trains with a partial canopy designed.

6.8.6 Lighting Design & Power

Conceptual light layout will be completed for six to nine station platforms, platform access, and bus stop/drop off areas.

Sub-Task Deliverables:

- Station Design Criteria Report
- Architectural Program Report
- Conceptual 10% Station site layout plans

6.9 Maintenance and Storage Facility

The Consultant will conduct the following design for a single maintenance and 80-car storage facility on the preferred site encompassing approximately 10-15 acres. The maintenance and storage facility should be designed in coordination with the Lechmere Station Relocation Project and the Northpoint development.

6.9.1 Maintenance and Storage Facility Design Criteria

The Consultant will meet with MBTA Mechanical and Operations staff to determine appropriate Maintenance and Storage Facility Design Criteria. The Maintenance and Storage Facility Design Criteria Report will be prepared for MBTA and EOT Planning approval prior to initiating station design.

6.9.2 Architectural Program

The Consultant will develop an Architectural Program for the Maintenance and Storage Facility in cooperation with EOT Planning and the MBTA. Opportunities to minimize environmental impacts through the use of alternative energy sources and recycled materials should be assessed. An Architectural Program Report will be prepared and distributed to EOT Planning prior to initiating the maintenance and storage facility design. Sign-off by EOT Planning and the MBTA on the maintenance and storage facility building components will be required.

6.9.3 Conceptual Architectural Design Plans

The Consultant will develop 10% maintenance and storage facility architectural design plans. The plans will also conceptually show the mechanical electrical layout of the building as well as other building

attributes. The plans will be prepared in MBTA standard cut sheet format at a scale of 1-inch equal 20 feet.

6.9.4 Conceptual Maintenance and Storage Facility Layout

The Consultant will develop a 10% maintenance and storage facility site layout plan that conforms with the MBTA's design criteria and in accordance with the Massachusetts Architectural Access Board and ADA requirements. The design will include conceptual site layout building foot print, and yard track layout (10-15 acre site layout) and be compatible with the Lechmere Station Relocation Project and adjacent development.

Sub-Task Deliverables:

- Maintenance and Storage Facility Design Criteria Report
- Architectural Program Report
- Conceptual Architectural and Civil Maintenance and Storage Facility 10% Design Plans

6.10 Traffic Impact Mitigation

Based on the vehicular and pedestrian level-of-service analysis results, the Consultant will work with EOT Planning to identify and define mitigation requirements to support the proposed project. These mitigation actions will focus on both structural (new traffic control, turn lanes, and pedestrian infrastructure improvement) and operational improvements (signal timing and phasing, signage, parking restrictions, and traffic pattern modification). The goal of the mitigation assessments will be to provide adequate pedestrian, bicycle, and vehicular access to the proposed station sites and to offset significant negative traffic impacts of the proposed project. This task is not intended to provide traffic solutions to long-standing congestion problems that do not inhibit access to the stations.

Sub-Task Deliverable:

- 10% design plans for conceptual roadway intersection improvements.

6.11 Community Path Design

Develop a conceptual design for the Community Path in accordance with MBTA approved guidelines. For portions of the alignment south of Lowell St. where inclusion of the Community Path within the right-of-way is deemed viable, the Consultant will develop the horizontal and vertical alignment for the Community Path to the 10% design level, using the commuter rail and Green Line horizontal and vertical design developed in Task 6.3. Where the path cannot be accommodated in the right-of-way, a conceptual design will be developed for the most viable alternative alignment that will provide a continuous pathway from Lowell St. to the eastern terminus of the project.

Sub-Task Deliverable:

- 10% design plans for the Community Path from Lowell St. to the eastern terminus of the project.

6.12 Construction Staging and Sequencing Options

Develop a schematic design for construction staging and sequencing identifying suggestions for track, bridges, intersections and stations. Temporary track and roadway alignments will be identified on the track and bridge plans. Develop an estimated construction schedule including bridge closings, the opening of new commuter rail and Green Line track segments and stations, and avoiding, to the extent possible, any disruptions in commuter rail service.

Sub-Task Deliverable:

- 10% Construction Staging Plans and Options

6.13 Cost Estimate

The Consultant will prepare a Conceptual Construction and Operating and Maintenance (O&M) cost estimate for the preferred alternative commensurate with 10% design including contingencies/allowances appropriate in this stage of project advancement. Construction costs should include, at a minimum, the commuter rail and Green Line track, bridges, retaining walls, and other supporting infrastructure, the maintenance and storage facility, all stations and supporting facilities, and any portion of the Community Path included in the project. Operating costs should include changes in Green Line, commuter rail, and bus operating costs.

Sub-Task Deliverable:

- Conceptual construction and operation cost estimate

6.14 10% Schematic Design and Report

The Engineer will develop a 10% schematic design report for the above conceptual engineering work efforts. The following summarizes the Schematic Design Report contents:

6.14.1 Track and Systems Design

The Consultant will include conceptual track, signals, communications, power system, and stormwater management layout and narrative for the preferred alternative.

6.14.2 Structural Design

The Consultant will include a Bridge Type Study Report.

6.14.3 Station Site Conceptual Design

The Consultant will include conceptual station site design and narrative for six to nine stations.

6.14.4 Maintenance and Storage Facility Conceptual Site Design

The Consultant will include conceptual site design and narrative for the Maintenance and Storage Facility.

6.14.5 Traffic Design/Intersection/Roadway Design

The Consultant will include the Traffic Study Technical Memorandum and 10% design plans and narrative for conceptual roadway intersection plans.

6.14.6 Construction Staging and Sequencing Options

The Consultant will evaluate and identify construction staging and sequencing options during the 10% Conceptual Design Phase and will advance the preferred option during preliminary design.

6.14.7 Real Estate

The Consultant will develop a preliminary outline of real estate acquisitions and easements required for the project.

6.14.8 Cost Estimate

The Consultant will summarize the conceptual construction cost and operating and maintenance (O&M) estimate.

Sub-Task Deliverables:

- 10% Schematic Design Plans and Report for Stations and Right-of-Way
- 10% Schematic Design Plans and Report for Maintenance and Storage Facility

6.15 Real Estate Requirements

Identify preliminary real estate acquisitions required for the right-of-way, stations, maintenance and storage facility and intersections including approximate square footage, current ownership and use. Prepare an acquisition list/memorandum.

Sub-Task Deliverables:

- Real Estate Acquisition List/Memorandum

6.16 Computer Animation

Prepare non-photo realistic, computer models illustrating the basic massing of buildings, roadways, bridges and railroad right-of-way based on completed 10% design in the immediate area of each of the proposed six to nine stations and the maintenance and storage facility, and prepare a computer animation (1 min. - 1.5 min. long) for each of these areas based on the computer model.

Sub-Task Deliverables:

- Seven (7) to ten (10) computer animations

Project Specifications
Acquisition Method to be used for Contract: *Fee For Service*

Single or Multiple Contractors for Contract Performance: Single Prime Contractor

Single or Multiple Departments may contract under this RFR:

EOT/MassHighway reserves the right to include an option for other departments to purchase services or commodities under the same terms of the contract. Should departments exercise this option; bidders will be required to specify their ability to extend services to other departments and the rates to be used. Other departments may execute separate contracts with awarded bidders.

Total Anticipated Duration of Contract: *18 Months*

Total Anticipated Expenditures for the Total Anticipated Duration of Contract:

This Contract will have a maximum obligation for the first 18 months of $2,500,000 inclusive of direct salary, indirect costs, direct costs and fixed fee; and will be funded under the Federal Aid Statewide Planning and Research (SPR) Program (80% federal, 20% state).

III. SUBMITTAL OF RESPONSES:

Preparation of RFR Responses

- The RFR Response shall be submitted in the format specified in the instructions below and shall include all completed forms required in this Section. Each response shall show the full legal name and business address of the applicant, including street address if different from mailing address, and shall be signed and dated by the person or persons authorized to contractually bind the applicant. Proposals by a partnership or joint venture shall list the full names and addresses of all partners or joint ventures. The state of incorporation shall be identified for each corporation that is a party as an applicant.

- The name of each signatory shall be typed below each signature. If requested by EOT/MassHighway, satisfactory evidence of the authority of a signatory on behalf of the applicant shall be furnished.

- The preparation of an RFR Response shall be at the expense of the applicant(s). Applicants are responsible for fully examining this RFR, addenda (if any), and referenced documents. See General Information for bidders' responsibilities in obtaining addenda through Comm-PASS.

- Bound proposals shall be submitted in the format described in this RFR. All proposals submitted shall become the property of EOT/MassHighway and will be subject to applicable Public Record laws.

- Unless formal notification is made to the contrary, the EOT/MassHighway contact person from issuance of the RFR until contract award shall be:

Steve Woelfel
Manager of Transit Planning
Office of Transportation Planning
Executive Office of Transportation
10 Park Plaza, Suite 4150
Boston, MA 02116
Fax: (617) 973-8035

- Applicants are not to address written questions to anyone other than the EOT/MassHighway contact person listed above, nor shall they attempt to obtain clarifications by phone or personal visit. The deadline for submitting written questions to the above address is April 27, 2007.

A pre-proposal meeting will be conducted from 10:00am-12:00pm on May 8, 2007, in the Conference Room of the EOT Office of Transportation Planning (Room No. 4150), 10 Park Plaza, Boston, Massachusetts. You must bring photo identification in order to enter 10 Park Plaza.

RFR Response Format and Contents

The applicant's RFR response shall include a letter of transmittal not to exceed three pages, signed by an individual, or individuals, authorized to bind the applicant contractually. The letter shall, at a minimum, indicate the following:

- The name of the applicant and any team members.

- The name of the proposed project manager for the applicant.

- That the applicant has already executed and filed the Commonwealth Terms and Conditions or that such document has been signed and is attached to the RFR Response.
- That the RFR Response will remain valid for a period of six (6) calendar months from its submission date and thereafter until the applicant withdraws it, or a contract is executed, or the procurement is terminated by EOT/MassHighway, whichever occurs first.

- The name, title, address, and telephone number of one or more individuals who can respond to requests for additional information, as well as the names of any individual(s) other that the signatory(s) who are authorized to negotiate and execute a contract on the applicant's behalf.

All information pertaining to the applicants approach to meeting the requirements of the RFR shall be organized and presented in the applicants RFR Response as prescribed below. These instructions must be strictly followed.

- PART I: (Original and twelve full copies)
  Section A: Qualifications
  Section B: Technical Proposal

- PART II: (Original and twelve full copies in a clearly marked sealed envelope separate from PART I)
  Section C: Financial Plan

The RFR Response shall be prepared providing a straightforward, concise delineation of the applicant's commitment to satisfy the requirements of this RFR. Accuracy and completeness are essential. Omissions and ambiguous or equivocal statements will be viewed unfavorably and will be considered in the evaluation. Since all or a portion of the successful RFR Response may be incorporated into any ensuing contract, all applicants are further cautioned not to make claims or statements that cannot be subsequently included in a legally binding agreement.

RFR Response Contents: PART I Section A. Qualifications
The prospective consultant's Qualifications portion of its RFR Response shall contain the following information in the sequence presented and under the headings given. Prospective consultants who do not comply with this restriction may be considered non-conforming and summarily eliminated at the discretion of the Evaluation Committee that will be responsible for the evaluation of all RFR Responses.

<u>Project Team</u>
Describe the prospective consultant's project team composition by indicating how it intends to perform the work, i.e., as an independent company, a partnership, a joint venture, or a combination involving a prime and sub-consultants. The role of each participating entity shall be fully described.

The prospective consultant shall detail specifically the work that it proposes to do with its own forces and the work to be performed by others. A reasonably approximate percentage of job hour effort shall be indicated for each such participating entity. EOT/MassHighway does not favor any one of the above-named combinations over any other.

Qualifications of Prospective Consultant's Team and Personnel
Identify the key personnel to be assigned to this project. Include summary resumes of key personnel proposed to staff this project and descriptions of comparable projects performed by the personnel to be assigned to this work. Identify the proposed project manager who will be responsible for the day-to-day execution of the project and relevant experience in leading similar efforts.

List the prospective consultant's recent projects (no more than six) having the nature, complexity and time constraint, and management issues similar to those anticipated for this project. Additional project details may be provided in clearly marked appendices to PART I.

Provide the names of at least two clients for whom the prospective consultant and sub-consultants has performed work similar to that proposed, and who may be contacted as references. Preferably, these references should include governmental agencies similar to EOT/MassHighway and should include the recent projects cited above. Use the Business Reference Form in the attachments.

Consultant Office and Staffing Plan
Standard Contract provisions require the consultant to maintain an adequately staffed local office. Any exception to this provision shall require a waiver by EOT/MassHighway.

Indicate the intent of the prospective consultant relative to office location, functions, and work to be performed there, and the anticipated resident staff. Final details are not required at this time. Also include the following: 1) project organization chart and, 2) staffing schedule chart indicating present and future staffing commitments to the prospective consultant's other ongoing or upcoming projects and how this work will be staffed.

Affirmative Market Program (AMP) Plan Requirements
Submit a full outline of the program to be implemented by the prospective consultant to meet the requirements of the proposed staffing plan.

State and Federal affirmative action requirements for consultants and sub-consultants are as follows:

1. Any selected consultant/sub-consultant with 50 or more employees and an estimated contract of $50,000 or more is required to have on file with EOT/MassHighway, or to submit, its affirmative action plan for the current year which complies with the provisions of 42 C.F.R. Part 60-2. The selected consultant should submit the

plan(s) to the Department for review with submission of the fee proposal or during contract negotiations.

2. A selected consultant/sub-consultant with less than fifty (50) employees and an estimated contract of $50,000 is required to submit its company Affirmative Action Policy. For firms of ten (10) or more employees, a workforce analysis shall be included.

Disadvantaged Business Enterprise (DBE) Participation

If selected, the consultant must make a good faith effort to procure a portion of any commodities and/or services necessary to perform the contract from businesses certified as being owned and controlled by socially or economically disadvantaged individuals. Certified Disadvantaged Business Enterprises (DBEs) may be located at www.somwba.state.ma.us.

Compliance with this requirement is monitored by the Massachusetts Highway Department, Office of Civil Rights. You may address questions regarding AA/EEO and DBE requirements to:

Massachusetts Highway Department
Office of Civil Rights
State Transportation Building
10 Park Plaza, Room 3510
Boston, Massachusetts 02116-3973
Telephone: 617-973-7139
Fax: 617-973-7311

Banking and Financial Data

As part of its RFR Response, the prospective consultant shall also provide reasonable evidence of its financial stability. This may include banking and/or other references.

Insurance and Risk Management

Indicate methods of complying with the liability and insurance requirements of the Service Contract Standard Provisions (Article I General Provisions, Section 22). Also provide a brief statement as to the prospective consultant's present standard insurance coverage or self-insurance program.

Disclosure Statements and Other Forms

Each prospective consultant must complete the forms listed in the attachments of this RFR package indicated as required and include them as the final section of PART I Section A Qualifications. Prospective consultants are advised to complete these forms carefully and accurately since certain of them shall become part of the contract with the selected consultant.

Each prospective consultant is advised that its performance of work for EOT/MassHighway may, at any time, raise questions about real or perceived conflicts of interest because of prospective consultant's relationship to other entities or individuals, including without limitation: (1) private and public owners of companies that may be affected by the project and/or (2) other state-created entities with potentially conflicting interests and/or concerns.

Accordingly, EOT/MassHighway reserves the right to: (1) disqualify any prospective consultant or reject any proposal at any time solely on the grounds that a real or perceived legal or policy conflict of interest is presented; (2) require any prospective consultant to take any action or supply any information necessary to remove the conflict, including without limitation, obtaining an opinion from the State Ethics Commission; (3) terminate any contract arising out of this solicitation if, in the opinion of EOT/MassHighway, any such relationship would constitute or have the potential to create a real or perceived conflict of interest that cannot be resolved to the satisfaction of EOT/MassHighway.

In addition, representatives and/or employees of the successful prospective consultant may be required to certify from time to time, in a form approved by EOT/MassHighway, that in connection with work under this Contract, they are in full compliance with the provisions of Chapter 268A of the General Laws and any other applicable conflict of interest laws. The prospective consultant agrees to disclose in writing any facts EOT/MassHighway may seek in order to resolve questions about potential conflicts of interest occurring during the period of solicitation or performance thereunder and, upon request of EOT/MassHighway, supply a full and complete list of its relationships to other entities and individuals. In any such event, a prospective consultant shall consult with the Commonwealth's authorized representatives to learn what action must be taken to resolve such conflicts and comply with all applicable laws and policies.

RFR Response Contents: PART I Section B. Technical Proposal
The technical portion of the RFR Response shall contain the following information in the sequence presented and under the headings given below. Prospective consultants who do not comply with this format may be considered non-conforming and downgraded at the discretion of the Evaluation Committee.

Understanding the Scope of Services
Describe the prospective consultant's general understanding of the scope of services and the key issues associated with performing the required consulting services in the specific functional areas involved. In addition, include statements covering the prospective consultant's familiarity with the project and describe unusual conditions or problems the prospective consultant believes may be encountered. The respondent's views on the challenges/opportunities of the tasks of this project can be included in this section.

Approach and Methods
Describe in detail the work plan and mechanics of how the prospective consultant will accomplish each of the tasks outlined in the scope of services. Special methods, techniques, or personnel required by a particular task should be covered in detail. Respondents should expand on the generalized outline of methods contained in the scope with specific details of how the tasks could be best accomplished, and, at the option of the respondent, propose additional and/or alternate methods aimed at improving the study processes and/or technical procedures.

Note: Between the above two sections, prospective consultants should clearly demonstrate how their understanding of the issues and approach to the study make them well suited to conduct the work. This type of information can be contained in either section, or both sections.

Demonstration of Capacity to Perform Work Within Schedule and Budget
Clearly demonstrate how the prospective consultant intends to deliver the products identified in the project task list, on schedule and within budget. Describe the intended method of task budget planning and control. It is expected that this contract will be in effect for 12 months starting from the effective date of a notice-to-proceed issued by EOT/MassHighway.

RFR Response Contents: PART II Section C. Fee Proposal
The Fee Proposal shall be based upon a detailed work plan for the required services including estimates of classified job hours for each specific work task, all direct and indirect labor costs, a net fee, and direct expenses that the selected consultant and its sub-consultants, if any, expect to encounter in the performance of the required services.

Cost estimates should include the number of project hours allocated for proposed staff, including project manager(s) and/or team leaders, and any sub-consultants or sub-contractors. Estimates for sub-consultants are required regardless of proposed payment method (direct expenditure or direct labor). Cost proposals should also include an allocation of hours to each project task (expressed in numbers and percentages of total project hours), including time allocation estimates for meetings.

Prospective consultants are directed to review the terms and conditions set forth in Article II of the attached Standard Provisions in the development of Fee Proposals. Payment Method II, Costs plus a Net Fee, is the payment method to be followed. Please note limitations of hourly rates for professional employees and

allowable overhead rates and modifications that have been made to such rates in the Special Provisions.

The estimated maximum budget for this project is $2,500,000 inclusive of direct salary, indirect costs, direct costs and fee.

The initial duration of the contract is 18 months with the condition that the contract shall be terminable at the direction of EOT/MassHighway if federal funding is not authorized or approved. The availability of federal funds is conditional upon the federal funding agency and approval by EOT/MassHighway.

Clarification of RFR Response
If clarification of the contents of any RFR Response is required by EOT/MassHighway, then EOT/MassHighway will request such clarification either in writing or in person by the applicants. Applicants must be prepared at any reasonable time to visit the EOT/MassHighway offices to clarify their Responses.

Submission of RFR Response
An applicant's response to the RFR consisting of the original and twelve copies of Part I, and the original and twelve copies of Part II (in a clearly marked sealed envelope) shall be submitted together no later than 12:00pm on May 25, 2007, and addressed to:

Kenneth S. Miller P.E., Deputy Secretary for Planning
Office of Transportation Planning
Executive Office of Transportation
10 Park Plaza, Room 4150
Boston, MA 02116

Responses received later than the specified date and time indicated above will be subject to rejection.

Review of Responses
The right is reserved, as the interests of EOT/MassHighway may require, to reject any or all responses to the RFR and to waive any informality in responses that are received. EOT/MassHighway in consultation with the Evaluation Committee also reserves the right at any time before responses are due to cancel these RFR requirements, or, after receipt and evaluation, to modify these requirements or cancel them entirely, or to initiate a new RFR.

To be considered responsive to the RFR, and consequently subject to further consideration, all proposals must meet the following three minimum evaluation criteria:

- Completeness of proposal
- Avoidance of conflicts of interest prohibited under law
- Submission of an Affirmative Market Program Plan

Proposals that meet the minimum evaluation criteria will be evaluated on the basis of the following eight comparative evaluation criteria:

- Professional competence of project team
- Qualifications/experience of project team in performing similar work
- Quality of affirmative market program plan
- Demonstrated understanding of the scope of services
- Technical approach and methodology
- Capacity to perform work within schedule and budget
- Performance on previous contracts; references
- Overall project cost and project benefits

Oral Presentations
Following an initial evaluation of RFR responses, applicant(s) found to be qualified and most responsive to the comparative evaluation criteria may, at the discretion of EOT/MassHighway, be invited to make an oral presentation of their RFR Responses to the Evaluation Committee and, possibly, to other interested parties invited by the Committee. Presentations must be made by the applicant's proposed project manager and by other top-level team members expected to be assigned to this work. Such oral presentations shall, as a general rule, be limited to approximately thirty minutes for presentation plus thirty minutes for questions. The Evaluation Committee may change these limits.

Contract Documents
The selected applicant(s) shall be required to enter into a contractual agreement with the Commonwealth of Massachusetts through EOT/MassHighway.

Applicants are encouraged to review in detail the provisions of the *Commonwealth of Massachusetts Standard Contract*, *Terms and Conditions*, the *Standard Provisions*, and *Special Provisions*. Each of these documents has been included as Attachments below. Any proposed alternative provisions or additional terms and conditions to the Standard Contract and/or to the Standard Provisions must be included in the original RFR Response submitted to EOT/MassHighway. Mutually agreeable terms, conditions and/or alternative provisions shall be subsequently considered and negotiated for inclusion in the contract in the Special Provisions. EOT/MassHighway shall not be obliged to accept any such proposed alternative provision, term or condition, and shall reserve the right to reject any subsequently proposed alternative provisions or additional terms and conditions

All bidders are required to review, complete, execute, and return the following two documents as specified below:

1. All bidders must have completed and executed the *Commonwealth Terms and Conditions* attached to this RFR. If the bidder has already executed and filed the *Commonwealth Terms and Conditions*, **please indicate this in your response**. If the bidder has not previously filed the *Commonwealth Terms and Conditions*, then the bidder must complete, execute, and return the *Commonwealth Terms and Conditions* attached to this RFR. The *Commonwealth Terms and Conditions* shall be incorporated by reference into any contract for commodities and services executed pursuant to this RFR. A bidder is required to execute the *Commonwealth Terms and Conditions* only once.

2. All bidders must also complete, execute and return the *Standard Contract Form* as follows:

___ (a) as the cover sheet to their response. Failure to return a completed and executed *Standard Contract Form* will disqualify the bidder's response.

_**X**_ (b) upon selection for contract negotiation and execution.

By executing the *Standard Contract Form*, the contractor certifies under the pains and penalties of perjury that it has submitted a response to a Request for Responses issued by EOT/MassHighway and that this response is the contractor's offer as evidenced by the execution by the contractor's authorized signatory; that the contractor's response may be subject to negotiation by EOT/MassHighway; and that the terms of the RFR, the contractor's response, and any negotiated terms shall be deemed accepted by EOT/MassHighway and included as part of the contract upon execution of the *Standard Contract Form* by MassHighway's authorized signatory.

RFR Attachments

The lists of attachments below are located under the Forms & Terms Tab of this solicitation. The Attachments are to be completed by the applicant and returned with the RFR Response.

- Standard Contract Form and Instructions
- Commonwealth Terms and Conditions
- Contractor Authorized Signatory Listing Form
- Affirmative Market Program (AMP) Plan Form
- Affirmative Action Commitment Statement Form
- Electronic Funds Transfer Authorization Form
- Request for Taxpayer ID Number & Certification (W-9) Form
- Northern Ireland Notice and Certification
- Executive Order 481 - Contractor Certification Form
- Green Line Extension Survey Base Mapping

These attachments will be incorporated in the final contract when awarded:

- Standard Provisions
- Special Provisions

The Standard Provisions and the Special Provisions referred to above contain additional contract performance requirements and business specifications.